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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/618,751	07/15/2003	Maria Ronay	20140-00296-US2; YOR92002	6935	
30678	7590 05/10/2004		EXAMINER		
CONNOLLY BOVE LODGE & HUTZ LLP SUITE 800			RACHUBA, MAURINA T		
1990 M STREET NW			ART UNIT	PAPER NUMBER	
WASHINGTON, DC 20036-3425			3723		
			DATE MAILED: 05/10/2004	4	

Please find below and/or attached an Office communication concerning this application or proceeding.

		Application No.	Applicant(s)				
Office Action Summary		10/618,751	RONAY, MARIA				
		Examiner	Art Unit				
		M Rachuba	3723				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply							
A SHOTHE! - Exter after - If the - If NO - Failur Any r	ORTENED STATUTORY PERIOD FOR REPLY MAILING DATE OF THIS COMMUNICATION. Insions of time may be available under the provisions of 37 CFR 1.1 SIX (6) MONTHS from the mailing date of this communication. Period for reply specified above is less than thirty (30) days, a reply repriod for reply is specified above, the maximum statutory period or to reply within the set or extended period for reply will, by statute reply received by the Office later than three months after the mailing and patent term adjustment. See 37 CFR 1.704(b).	36(a). In no event, however, may a r y within the statutory minimum of thir will apply and will expire SIX (6) MON . cause the application to become AE	reply be timely filed by (30) days will be considered timel ITHS from the mailing date of this or ANDONED (35 U.S.C. § 133).	y. ommunication.			
Status							
1)	Responsive to communication(s) filed on <u>15 Ju</u>	<i>ıly 2003</i> .					
,							
3)□							
Disposition of Claims							
4) ☐ Claim(s) 1-9,20 and 21 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) 1-9,20 and 21 is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) are subject to restriction and/or election requirement.							
Applicati	on Papers						
9)☐ The specification is objected to by the Examiner.							
10) \boxtimes The drawing(s) filed on <u>15 July 2003</u> is/are: a) \boxtimes accepted or b) \square objected to by the Examiner.							
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).							
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.							
Priority ι	ınder 35 U.S.C. § 119						
 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) All b) Some * c) None of: 1. Certified copies of the priority documents have been received. 2. Certified copies of the priority documents have been received in Application No. 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. 							
2) Notice 3) Information	ce of References Cited (PTO-892) the of Draftsperson's Patent Drawing Review (PTO-948) the mation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) the No(s)/Mail Date 7/15/03.	Paper No	Summary (PTO-413) s)/Mail Date Informal Patent Application (PT 	O-152)			

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- 2. Claims 1, 3, 4, 6, 8, 20 and 21 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Walsh et al 6,045,716. Please refer to column 8, lines 51-65. '716 states that the slurry mixture can be a solution of water and particles, the particles are selected from a material such as titanium dioxide, titanium nitride, aluminum oxide, aluminum trioxide, iron nitrate, cerium oxide, silicon dioxide (colloidal silica), silicon nitride, silicon carbide, graphite, diamond, and any mixtures thereof. Note the use of graphite as an abrasive particle, but that is also a known lubricant, and that can be part of a mixture of particles with the other materials listed. Graphite has a coefficient of friction of 0.1. (The Physics HypertextbookTM (C) 1998-2004, Glenn Elert, copy included.)

Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

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- 4. Claims 2, 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh et al '716. '716 does not disclose the specific particle size range or relative range of the amounts of the lubricant particles and abrasive particles. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided '716 with the required sizes and amounts of materials, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Here, the relative sizes and amounts of the particles in the slurry would depend on the type and thickness of material being planarized.
- 5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Walsh et al '716 in view of Chang et al 2003/0211743 (filed May 7, 2002). '716 does not disclose that a surfactant may be added to the slurry. '743, in a slurry for CMP applications, teaches that it is old and well known to use surfactants in CMP slurries, to maintain slurry particle dispersion. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided '716 with a surfactant as taught by '743, [007] lines 12-14, to maintain particle dispersion.

Conclusion

- 6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other similar CMP slurries are cited of interest.
- 7. Any inquiry concerning the content of this communication or earlier communications from the examiner should be directed to M. Rachuba whose telephone number is (703) 308-1361. The examiner can normally be reached on Monday through

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Friday from 8:30 AM to 4:00 PM. Any inquiries concerning other than the content of this and previous communications, such as missing references or filed papers not acknowledged, should be directed to the Customer Service Representative, Tech Center 3700, (703) 306-5648.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail, can be reached on (703) 308-2687.

In lieu of mailing, it is encouraged that all formal responses be faxed to 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148.

M. RACHUBA PRIMARY PATENT EXAMINER ART UNIT 3723



mtr May 6, 2004